PA-SHT REV 5

SUBSTATION SS-41N

SUBSTATION SS-41S

#8A TERM. STRIP A.T.S. -8- — TO CONTROL CIRCUIT — A.T.S. AUX. CONTACTS* — ATS-41NL

#6A TERM. STRIP A.T.S. -6- — TO CONTROL CIRCUIT — A.T.S. AUX. CONTACTS* — ATS-41NR

C-8 1"C., 16 #12 — 2 SP. W

C-6 1"C., 16 #12 — 2 SP. W

TERMINAL CABINET #ATS-41N

HOLD WIRE CONNECTION TO THE TERMINAL STRIP UNTIL 6A

C-1N 3/4"C., 5 #12

6A INSTALL / 6A REMOVE — TEMPORARY CONNECTION

2 SP. W

3 SP. W

C-3N 3/4"C., 8 #12

EXIST. ATS-41NL — #8A — SE — EXIST. TERMINAL DESIGNATIONS

EXIST. ATS-41NR — #6A — SE

EXIST. J.B. — 8A-REMOVE

EXIST. WIRES

LEGEND – CONTROL WIRE STAGING – (SEE NOTE 1 DWG #E-96)

- 4A – AS SWITCH IS INSTALLED CONNECT ALL WIRING EXCEPT FOR FINAL CONNECTION POINTS AS FOLLOWS:
- 8A – MAKE CONNECTIONS WHEN EXIST. ATS-41NL #8A IS REMOVED
- 6A – MAKE CONNECTIONS WHEN EXIST. ATS-41NR #6A IS REMOVED

FOR STAGING SEE DWG. #E-18 LOAD TRANSFER STAGING FOR SS-41N

- 5A – MAKE CONNECTIONS WHEN EXIST. 1S-41SL #5A IS REMOVED
- 9A – MAKE CONNECTIONS WHEN EXIST. ATS-41SL #9A IS REMOVED
- 7A – MAKE CONNECTIONS WHEN EXIST. ATS-41SR #7A IS REMOVED

FOR STAGING SEE DWG. #E-32 LOAD TRANSFER STAGING FOR SS-41S

REMOVE EXIST. WIRE AS REPLACEMENT WIRE IS CONNECTED (TYPICAL)

FROM ATS-41NL #8A

FROM ATS-41SL #9A

EXIST. WIRES TO REMAIN (TYP.)

C-SE 3/4"C., 7 #12

1 SP. W

3 SP. W

SHUTTLE. ELEV. EXIST. J.B. IN ELEV. MACH. RM

C-N 1-1/4"C., 22 #12

C-RE 3/4"C., 7 #12

REMOVE EXIST. WIRE AS REPLACEMENT WIRE IS CONNECTED (TYPICAL)

FROM ATS-41NR #6A

FROM ATS-41SR #7A

EXIST. WIRES TO REMAIN (TYP.)

BANK. ELEV. EXIST. J.B. IN ELEV. MACH. RM

1 SP. W

WIRE DESIGNATION – SEE DWG #E-96 ELEMENTARY DIAGRAM

PARALLEL EXIST. AND NEW WIRE ON #C41A. REMOVE EXIST. WIRE WHEN LAST "ATS" IS REMOVED. (ALL OTHER EXIST. WIRES ON THE TERMINAL STRIP TO BE REMOVED AS NEW WIRES ARE CONNECTED)

SEE LEGEND – CONTROL WIRE STAGING THIS DWG.

EXIST. WIRE (TYP.)

EXISTING TERMINAL DESIGNATION TERMINAL ARRANGEMENT IS NOT AS SHOWN ON THIS DRAWING

BLACK / YELLOW / ORANGE / BLUE

EXIST. WIRE TO REMAIN

C-C 1-1/4"C., 23 #12

EXIST. TERMINAL CABINET IN ELECT. CLOSET "C"

#5A TERM. STRIP A.T.S. -5- — TO CONTROL CIRCUIT — ATS-41SL

C-RC 3/4"C., 9 #14

5-12 (5A9) — 5-13 (5A8) — 5-11 (5A10) — 5-10 (FP1-5) — 5-14 (5A4) 6A NORMAL AVAILABLE — 5-15 (5A5) — 5-16 (5A6) 8A EMERG. AVAILABLE — 5-17 (5A7)

RUN TO (DIP) IN CKT. BKR. #CB-R1

EXISTING FIRE PUMP CONTROL STATION

C-5 3/4"C., 10 #12

TERMINAL CABINET #ATS-41S

C-3S 3/4"C., 12 #12

#9A TERM. STRIP A.T.S. -9- — A.T.S. AUX. CONTACTS — ATS-41SL

C-9 1"C., 15 #12

C-S 1-1/4"C., 25 #12

TERMINAL CABINET #ATS-41A

#7A TERM. STRIP A.T.S. -7- — A.T.S. AUX. CONTACTS — ATS-41SR

C-7 1"C., 15 #12

HOLD WIRE CONNECTION TO THE TERMINAL STRIP UNTIL 7A

C-TS 3/4"C., 4 #12

9A INSTALL / 7A REMOVE — TEMPORARY CONNECTION

EXIST. J.B.

EXIST. ATS-41SL — #9A — SE — EXIST. TERMINAL DESIGNATIONS

EXIST. ATS-41SR — #7A — SE

EXIST. WIRES

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. WTC-802.071 IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 6/21/95 — Sultan A. Aslam — SPEC. WRITER

DATE 8/15/95 — Peter T. Sweeney — ENGINEER OF DESIGN

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THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER WORLD TRADE CENTER

CHIEF ELECTRICAL ENGINEER

Engineering Department
Design Divisions

The World Trade Center
Electrical/HVAC
Upgrade Program

Title

TOWER ONE AND TWO LOW VOLTAGE SUBSTATIONS CONSTRUCTION AND INSTALLATION

ELECTRICAL

SUBSTATION SS-41N & SS-41S AUTOMATIC TRANSFER SWITCH CONNECTION DIAGRAM

| No. | Date | Revision | Approved |
|---|---|---|---|

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

| LEAHY/ FISCHER | LEAHY | A.C. |
|---|---|---|
| Designed by | Drawn by | Checked by |

Date 5-1-95 — Scale AS NOTED

Contract Number WTC 802.071 — Drawing Number E-97

FILE NAME = 802071E7 — APR. 10, 1995